Exercise walk-through

Price Discrimination ▪ 4.3

eXercise

You must be able to

- define **price discrimination 价格歧视** and list the conditions required
- explain **perfect (first-degree) price discrimination**
- analyse its effect on output, **consumer surplus**, and **producer surplus**
- explain why perfect price discrimination is allocatively efficient with no deadweight loss

Method — Price discrimination

Charging different buyers **different prices** for the same good. It needs: **market power**, a way to **separate** buyers by willingness to pay, and no **resale** between them.

Method — Perfect price discrimination

The firm charges each buyer their **maximum willingness to pay**, capturing **all** consumer surplus as producer surplus.

Method — Efficiency

It produces the **allocatively efficient** quantity (up to $P = MC$), so there is **no deadweight loss** — but consumers gain nothing.

Practice 2.1 ▪ 1 mark

Define price discrimination.

Solution 2.1

Worked steps

charging different buyers different prices for the same good **B1**.

Practice 2.2 ▪ 2 marks

State two conditions needed for a firm to price discriminate.

Solution 2.2

Method: Perfect price discrimination

Worked steps

any two of: market power, ability to separate buyers, ability to prevent resale **B1** **B1**.

Practice 2.3 ▪ 1 mark

State what happens to consumer surplus under perfect price discrimination.

Solution 2.3

Method: Perfect price discrimination

Worked steps

it is reduced to zero (captured by the firm) **B1**.

Exam-style 3.1 ▪ 1 mark

Perfect price discrimination charges each buyer

A the same price

B their maximum willingness to pay

C marginal cost

D zero

Solution 3.1

Method: Perfect price discrimination

A the same price

B their maximum willingness to pay ✓

C marginal cost

D zero

Worked steps

B.

Exam-style 3.2 ▪ 1 mark

Under perfect price discrimination, the deadweight loss is

- **A** doubled
- **B** zero
- **C** at its maximum
- **D** unchanged

Solution 3.2

Method: Perfect price discrimination

A doubled

B zero ✓

C at its maximum

D unchanged

Worked steps

B.

Exam-style 3.3 ▪ 1 mark

A firm can identify each buyer's willingness to pay and prevent resale.
(a) Name the pricing strategy it can use.
(b) State what happens to consumer surplus.
(c) State whether output is allocatively efficient.

Solution 3.3

Method: Perfect price discrimination

Worked steps

(a) perfect (first-degree) price discrimination **B1**. (b) it falls to zero **B1**. (c) yes — it is allocatively efficient **B1**.